

I I N G H T H Y O L,
I T S U S E S I N S O M E S K I N
D I S E A S E S.

Being a Thesis for the Degree of M.D. of
Edinburgh University.

by

A L E X A N D E R B R O W N L I E,
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Drayton House,
Redcar,
YORKS.

April, 1900.



INTRODUCTION.

In the year 1894 I began private practice for myself and in as far as it lay in my power I have tried to keep notes of all the cases which have been attended by me. Every prescription I have written has been recorded, so that in the course of the last few years a large amount of clinical facts have been accumulated by me. In looking over these notes I was struck by the number of cases, especially of skin disease, in which I used Ichthyol. I began to use it in 1895 and now in this Thesis I try to record a few of these cases, and the conclusions I have drawn therefrom. I have also summarised the opinions of a few British and German doctors, who have used this drug. Further, all the cases have occurred in ordinary private practice, not in hospital, where patients have the advantage of trained nurses and resident physicians.

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HISTORY.

Ichthyol was discovered by Schroeter and introduced by Unna in 1883. Since then many eminent dermatologists and physicians have written on the value of the drug.

CHEMISTRY.

Ichthyol is obtained from the fossilized remains of fish and sea animals - hence the name. The dry distillation of these yields an oil of the following composition.

Carbon.	77.25
Sulphur:	10.72
Hydrogen:	10.72
Nitrogen:	1.10

This oil is acted upon by sulphuric acid (H_2SO_4) and is converted into a sulphonic acid compound.

This is neutralized by alkalies resulting in two salts, namely:

1. Ichthyol Ammonium Salt: $\text{C}_{28}\text{H}_{36}\text{S}_3\text{O}_6(\text{NH}_4)_2$
2. Ichthyol Sodium Salt: $\text{C}_{28}\text{H}_{36}\text{S}_3\text{O}_6\text{Na}_2$

The Ammonium Salt is a thick treacley liquid and is the preparation generally used, and commonly known as Ichthyol. It is the salt used by me.

It is miscible with water and mixes well with lanoline, /



lanoline, vaseline, glycerine and all fats and oils.

The Sodium Salt is semi-solid.

HOW USED.

1. Ointment: This is one of the commonest methods and in practice one of the easiest to use by patients themselves.
2. Gelatine application: Much used by Unna.
3. Varnish:
 - (a) Mixed with collodion.
 - (b) Mixed with water alone.
 - (c) Mixed with starch, albumen and water.
4. Ichthyol Salve Muslin: Very useful in applying to face.

Internally it is given in the form of pill, capsule, tabloid, ⁱⁿ and water.

ACTION.

Unna calls Ichthyol a "reducing agent" on account of its abstraction of oxygen from the tissues.

I. Externally on Skin.

I hereunder give a summary of what Unna describes in his work "Ichthyol and Resorcin as reducing agents." (Dermatologische Studien. 1886.)

(1) Unbroken Skin.

(a) Weak Application: This causes the horny layer/

layer of the skin to become thicker and harder; the cornification extending rapidly into the deeper layers. Unna has shown experimentally that the effect of the withdrawal of oxygen from the skin is to cause a hardening of the epithelium. Vice versa the production of this effect can be looked upon as due to a reducing action of the agent used. After continued use the horny layer exfoliates, separating as a dead integument, leaving a newer skin behind.

If the action went deeper the endothelium becomes fatty and degenerated. The result, therefore, of a weak reducing action is:--

- (1) Diminution of heat.
- (2) Reduction of swelling.
- (3) Paling of the tissues.
- (4) Relief of pain.

(b) Strong Applications: These cause pain, inflammation, swelling and formation of blebs.

Tabulating and comparing them thus:

A. In each dose alike,

More marked cornification.
Dark colour of horny layer.

B. Weak results in,

Itching.
Removal of Inflammation.
Pustulation, if pus cocci are present.
Alleviation of Pain.
Removal of Oedema.

C. Strong results in,

Pain - seldom itching.
Inflammation.
Oedema.
Removal of pustulates and boils.
Pain.
Formation of blisters.
Softening of the collagenous framework.

II. Exposed Cutis.

The ultimate effect on this is determined more by the parts of cutis to which the remedies are applied than by the amount of the dose. Thus to a cut in normal skin immediate union is the result of the application of a pure ichthyol salt. Similar results follow in burns of the first degree or second degree when the blisters are unbroken. On the other hand applied to burns of second degree with blisters broken it would cause extensive erosions. On the glans penis or foreskin pain oedema and acute inflammation would result.

Again, injected into a cavity of the cutis lined by poorly nourished pavement endothelium, into subcutaneous tissue, into a fistula or serous cavity, such as the Tunica Vaginalis, a rapid primary union with no inflammation, results. It therefore depends on the "reaction ability" of the tissue directly affected whether we get inflammation or not.

Internally

That Ichthyol given internally leads to the elimination of sulphur by the skin has been clinically observed by Radcliffe, Crocker, (Disease of Skin, 2nd Edit. p.39). I myself have seen cases of skin disease where Ichthyol given internally has caused a more rapid improvement than when it was used externally alone, these cases being ones in which there was no constipation, indigestion, or anaemia likely to be benefited by Ichthyol and thereby causing an indirect benefit to the skin. Such cases must be put down to a direct benefit of ichthyol on the skin. On the other hand, Cornelius Beck and Von Fenyvessy (Arch. Internat. de Pharmac. et de Therap., Vol.IV. 1899.) conclude from experiments on dogs that in them ichthyol is absorbed by the normal skin.

Ichthyol acts on the Alimentary system beneficially, especially in those cases of foul tongue, constipation and general signs of gastric disturbance. Also in cases of weak digestion, due to anaemia.

Action on the Urine.

It does not affect the volume, acidity, and proportion of organic and inorganic phosphates.

On the other hand, the colour was deepened; a violet-like odour produced. Agitation with ether produced a resinoid non-crystallizable substance with an/

with an aromatic odour, and of brownish colour which deepened on standing.

Solid constituents fell in 24 hours from $2-2\frac{1}{4}$ oz. to $1\frac{3}{4}$ -2 oz., equalling a fall of 11 per cent.

Total amount of nitrogen fell 14 per cent. and the greatest excretion took place during the night, while under normal conditions it takes place in the afternoon.

Excretion of sulphur was diminished, not increased.

From these data Professor Zuelzer of Berlin (Monatshefte. f. pract. Dermat., 1886. No.12) inferred that the amount of albumen in the tissues was increased.

Dr Helmers (Virchow's Archiv. f. Patholog., Anat. and Physiolog. 1894. Part I.) experimented on himself and concluded that

- (1) Ichthyol limits degeneration of albumen in the body and promotes assimilation.
- (2) At least a third of the Ichthyol Sulphur introduced into the system circulates in the body, and is finally excreted in the urine.
- (3) The portion of the remedy excreted by the faeces appears also partially to have circulated throughout the body and to have been subsequently secreted again by the intestinal glands.

Dr Wild (Brit. Med. Journal, 4th Nov. 1899)

has/

has not found much good result from the internal use of ichthyol.

Besnier (Traite de Therapeutique Applique) finds good results in Eczema, when taken internally.

Cranstoun Charles (Lancet, 26th Sept. 1891) has found that ichthyol taken internally increases the weight and agrees with Zuelzer that it retards the disintegration of albumen in the system.

Unna has found noticeable improvement result from the taking of ichthyol in weakness and bad digestion.

I have recently used a combination of ichthyol and albumen called Ichthalbin, discovered by Sacch and Vieth and which Homburger (Therapeut. Monat., July, 1899) has used successfully in the eczema of children. It causes a lessening of the exudation. In one adult to which I gave it for an extensive weeping eczema of the skin of abdomen and vulva, it quickly **caused** marked improvement. I have found it of great use in the eczema of children associated with teething.

Antiparasitic Action.

This is markedly shown by its effect in erysipelas. Dr Allan Jameson, in his address to Skin Section of the British Medical Association on Rest/

Rest in the Treatment of Skin Diseases, speaks of ichthyol "strangling erysipelas in its birth, so to speak, if used promptly and efficiently."

Does this result from an actual antigermicidal effect or by a withdrawal of oxygen causing a constriction of blood vessels, or by a combination of both?

Naussbaum believes it is due to its reducing effect. Klein is doubtful which to ascribe it to.

Latteux (Memoirs de la Societe de Medecine pratique, 15th April 1892) finds that 2% to 4% solution of ichthyol destroys among others,

Staphylococcus pyogenes aureus.
Staphylococcus pyogenes albus.
Streptococcus erysipelatosus.
Gonococci.
Trichophyton tonsurans.

Recently Professor Loeffler has prepared, starting from ichthyol, a series of oily bodies called Amytols with powerful antiseptic powers.

I have used ichthyol myself in eczema, acne, erysipelas, etc., and will now take several cases and show the good results of ichthyol.

Eczema

This is defined by Malcolm Morris as a catarrhal inflammation of the skin, originating without any visible irritation and characterised in some stages by

a/

a serous exudation. Kaposi's definition is somewhat similar. The German idea is that it is a local disease and cured by local applications. The French that it is constitutional and therefore cured by therapeutical means. The Americans are divided in opinion. By many it is supposed to be a purely parasitic disease. Leredde of Paris strongly supports the parasitic theory. Unna describes a monococcus as the agent.

Ichthyol internally and externally is one of the most efficient agents in our hands for treating eczema in all its stages. I quote a number of cases to show its value. They are not taken in any prescribed order but taken at random from my notebook. In this district eczema is a very common trouble and over a period of five years during which I have used ichthyol I have had many successful cures. The first case I quote was the first in which I used ichthyol. I quote it at greater length than any other. At that time my knowledge of ichthyol was limited.

Case I.

Mr A. F. aet. 33, married. Five children. At the time of treatment he was a master printer. At age 16 years he suffered from severe haemorrhage during typhoid fever leaving him anaemic. Strumous constitution/.

constitution.

He suffered from eczema for two years before seeing me. I saw him first in February. 1895. His face and neck were acutely eczematous, weeping, painful and itchy. The neck was particularly bad. On flexor aspects of arms and thighs there was a drier form of eczema. The itching was extreme, causing him to scratch even in his sleep. Wherever he scratched the disease spread even in good skin. Tongue furred, constipated, and no appetite. He had been under treatment, but ^{had} got gradually worse.

Treatment.

I forbade his going to business; kept to the house and on light food. Internally given a mixture of Nux Vomica, Liq. Arsenicales and Chiretta. Externally he applied the following twice a day.

R_x

Ac Salicyl.	Gr. V.
Ichthyol	M. XXX.
Resorcin	Gr. XX.
Pulv. Ac. Borici	3℥
Pulv. Amylā	3 i
Vaseline ad	3ii ft. ung.

17th February, 1895.

No improvement. Itching very bad. Says the ointment/

ointment is painful. I stopped it and used

Rx

Bis. subnit.	3 ii
Zinci oxidi	3 i
Ichthyol	M xxx
Vaselin	ad 3 ii

21st February:

Still much itching. On the neck large brown epithelial scales are beginning to come off.

26th February:

The arms and legs being dry I prescribed a 20% ichthyol paint in distilled water. This relieved the itching better than anything before. Fifteen grains of trional were given each night to make him sleep.

31st February:

The gastric condition being still bad, I added pepsin to the mixture and dilute nitro-hydrochloric acid and the following pill taken every second night:

Rx

Iridin	
Euonymin	āa gr. 8
Ext. Nux Vomic.	gr. 1/4
Pill Colocy. et Hyoscy.	gr. iii

14th March:

Neck and face show improvement. Less exudation and not so painful. Bowels act better but alimentary tract otherwise not satisfactory. I now thought of giving him Ichthyol internally and put him on

Pill Ichthyol gr. ii *f*

Sig. Two pills three times a day after food.

*

21st March:

Distinct improvement all round.

29th March:

Improvement continued. No more exudation. No papules on face. Able to wear a soft tennis shirt. Washes face gently with a 10% Ichthyol Soap (Unna). Changed the ointment to a simple 4% Ichthyol Lanolin Salve. He can do now with an Iridin pill half the previous strength. Eating better. Tongue cleaner.

April:

During the whole of this month he steadily improved. By the middle of the month the arms and legs were quite better. The face and neck still showed some redness and a few papules. Itching still felt but not nearly so much.

At the beginning of May I sent him to Harrogate for/

for a change. He needed no baths but drunk the Mild Chalybeate waters at the Spa. On his return he was greatly improved in general health. The only signs of eczema remaining were a slight scaliness of the neck. Itching was still felt even in parts which were quite healed. I therefore sent him to Dr Allan Jamieson, Edinburgh, who prescribed a carbolic acid and spirit lotion with a weak ichthyol and resorcin ointment. Still these did not relieve the itching at once. It gradually wore off, however. Internally Dr Jamieson prescribed Oppenheimer's liquor euonymin with bismuth, as he had a slightly furred tongue; this however not doing him as much good as the ichthyol, so I added it again (He stopped it on going to Harrogate). The two combined quickly cleared the tongue up again.

Remarks:

I believe that if I had used ichthyol internally at first and externally a weak 2% ichthyol salve without salicylic acid or even resorcin I should have had quicker results. A week after taking the ichthyol internally the improvement was most distinct. Again, previous to coming into my hands he had been under treatment for eighteen months with not the slightest benefit. As far as I could learn ichthyol had not been used.

One/

One peculiar feature was the itching which was not relieved by ichthyol. This may have been due to reabsorbed bile, due to the catarrhal inflammation of the alimentary tract. His weight steadily increased under the ichthyol.

Again, any slight attack to which he was subject for two years often was quickly subdued by a 5% ichthyol salve. In the last three years he has had no more attacks.

Case II.

Mr A. B. M., aet 26, unmarried. Eczema of leg, not varicose. There was a large patch above the ankle reddened and with serous exudation, very itchy.

21st February, 1895.

Part was not to be washed with soap, oatmeal water used. Five grs. of ichthyol given internally three times a day and the following used externally

Rx

Ichthyol	M xx.
Bis.subnit.	℥ ii.
Zinc Oxidi	℥ i.
Pulv. Amyli	℥ ii.
Vaselin	ad ℥ ii. ft.ung.

1st March, 1895.

Patient much improved. No pain and no weeping.
Part is now dry and scaly. Ordered to apply twice
a day.

R

Ichthyol M 50.

Aq. Distill. ad 3 i.

14th March 1895.

Patient reported himself well. Skin normal.

Remarks:

The relief of itching and pain in this case were complete. The patient expressed his gratitude for the relief. The cure was rapid and complete. He has never been troubled since.

Case III.

Mr B., aet 68, retired solicitor. Nothing particular in his own or family history. No syphilis. Slight tendency to gout.

5th May, 1899.

Suffering from eczema of right leg. From knee to toes it was swollen to twice its size, pitting on pressure. Heart sound but weak. No albumen in urine. Left leg normal. All over it, i.e. right leg was red inflamed/

flamed and weeping. Many places covered with crusts which when detached left an exuding red surface. On one hand and arm (right) there were small patches of dry and scaly eczema. Could give no cause for origin. It began as a small red spot which spread.

Treatment:

Leg elevated, and at complete rest. Pill
ichthyol 5 grs. given three times a day after food.
Also a mixture of strychnine and digitalis to improve
the circulation. Externally applied,

Rx Bis. subnit. ℥ iii.
 Ichthyol M. 24
 Ung. Zinci Oxidi ad ℥ ii.

Sig: Apply twice a day.

22nd May 1899.

Swelling and pain reduced. Weeping improved.
Large brown scales being detached. Arm and hand
treated with a 10% ichthyol lanoline salve.

10th June 1899.

Swelling now almost gone. Most of leg in a dry
scaly condition except a very small part at back.
Now ordered to use,

Rx Ichthyol ℥ i.
 Resorcin gr. xx.
 Hyd Ammon gr. x.
 Vaseline ℥ i.
 Lanoline ad ℥ i. ft. ung.

19th June, 1899.

Now allowed to walk. Leg normal in size and dry.

1st July 1899:

Only a slight dry scaly condition behind calf. Rest of leg well. Still ordered to continue pills and ointment.

20th July, 1899:

Leg now well.

Remarks:

This was a bad case. He had been under treatment for six months before. The rest helped, but the relief given by the ichthyol by its action on the dilated vessels was the direct means of cure.

Case IV.

Mrs W., aet 47. A hard working woman. Eczema on hands and arms. Fingers were red, painful and cracked in places. Face had patches of dry scaly eczema.

13th May, 1899.

Ichthyol 5 grs. three times a day, given internally. Externally on account of the hardened skin.
I/

I prescribed

Rx
Ichthyol 3 i.
Resorcin gr. xx.
Zinci Oxidi gr. xx.
Vaselin
Lanoline ad 3 i. ft.ung.

This was too strong and caused a little pain; I changed it to

Rx
Ichthyol M. 48.
Hyd. Ammon. gr. x.
Ung. Zinci Oxidi ad 3 ii.

This did better, pain and swelling being relieved. It was continued for a month until the arms were quite dry and scaly. Then she was ordered a 10% lanoline ichthyol salve similar to what she was having for her face. She steadily improved and in a fortnight was quite well, though she continued the ichthyol internally.

Remarks:

Here as in the two previous cases there was no known cause. The digestive organs were all right, but the ichthyol taken internally did the eczema direct good.

Case/

Case V.

Mrs T., aet 60 years. She had suffered for years from recurrent attacks of eczema. The present one was especially bad. It was brought on by worry. Any nervous excitement or worry brought on an attack. She was inclined to be melancholic.

Both knees were scaly red and itchy. The wrists were similarly affected, while the lower part of the abdomen and vulva and upper part of thigh were red, painful and exuding a serous discharge copiously.

30th October 1899.

I first saw her on this date.

Treatment:

Abdomen - At first even a weak ichthyol ointment did not suit. It caused more pain. It was tried alone and in combination with bismuth subnitrate - a combination of these two I find is often good in relieving a raw surface. I then simply used a dusting powder of starch and bismuth with a little boric acid and relieved her of any pressure from the bedclothes.

9th October, 1899.

I gave her now Ichthalbine, 15 grs. in cachet three times a day. At the end of a week there was much/

much less pain and much less exudation.

17th October 1899.

I now venture to give a 3% ichthyol lanoline vaselin salve. It did admirably now. It relieved the itching. The skin soon resumed the normal appearance. Legs and arms.

She applied the following twice a day,

R _x	Ichthyol	℥ i.
	Hyd. Ammon.	gr. x.
	Zinci Oxidi	℥ ii.
	Resorcin	gr. x.
	Vaselin	℥ vi.
	Lanolin ad	℥ ii. ft. ung.

Improvement was manifest from the first. She was better in six weeks, continuing the ichthalbine all the time.

Reamrks:

The giving of Ichthalbin here in an adult certainly relieved the weeping and pain.

I had previously used ichthyol internally and externally on this patient with great success. In one attack on her legs in 1895 using too large doses caused the epithelium to come off in large brown scales, leaving what seemed a new tender skin underneath; but the application of this strong ointment,

12%/

12% the new epithelium was destroyed also. On the application of a 3% ointment this ceased and she made steady progress to recovery. In her last attack recovery was quicker than in any other. Arsenic was never of any use in this case.

Case VI.

Miss I.C., aet 7 years. Eczema Seborrhoeicum of Scalp. Covered with crusts. Neck and face had a good many papules spread over them. Head painful to touch. Hair coming out.

Treatment:

Seen 10th January, 1900. Hair was cut close. Crusts softened by olive oil, and starch and boracic acid poultices. On the removal of the crusts the following was applied night and morning.

R _x	Ichthyol	M. 50.
	Bis. subnit.	3 i.
	Hyd. Ammon.	gr. v.
	Ung. Zinci Oxidi ad	3 i. ft. ung.

Internally, Ichthalbine 5 grs. three times a day and 1 gr. calcii sulphid given also three times a day. She was well in three weeks.

Remarks:

The/

The cure was speedy. Ichthalbine here actually helped. After beginning it there was no more exudations. It was a bad case to begin with too.

Case VII.

Miss T., aet 17 years. Eczema of arms near elbows, scaly at parts, but with a few crusts and slight exudation in others. Knees were in a somewhat similar condition.

Treatment:

Internally,

R _x	Ichthyol	M. 25.
	Bis. carb.	℥ i.
	Ung. Plumb subacetat.	℥ i.

Though there was no history of syphilis arsenic and Potass Iodid were given internally.

First seen 22nd May, 1897. She returned on the 10th June when the exudation was gone and every place was dry and scaly. I ordered her,

R _x	Ichthyol	℥ i.
	Resorcin	gr. x.
	Hyd. Ammon.	gr. x.
	Vaseline.	℥ vi.
	Lanoline ad	℥ ii. ft. ung.

She/

She returned two days later stating that this gave her pain. I reduced the ichthyol to M.50 and removed the mercury altogether. This suited much better and in a fortnight she returned quite well.

Remarks:

In this case no ichthyol was given internally as I thought the other treatment would answer better, although I could not find any evidence of specific disease.

Case VIII.

I quote this case, as it was one of my disappointments.

Mrs. W., aet 60. first seen on the 26th July, 1896, suffering from acute eczema of both legs and feet. They were weeping and painful, and had crusts which on removal left a red exuding surface.

Treatment:

For two months I had her on ichthyol ointments of all strengths from 1% to 10%, but all to no purpose. The disease would seem to improve, but in a day or two would be as bad as ever. For some reason (not recorded in my notes) ichthyol was not given internally, but arsenic and nux vomica. Even a simple starch/

starch and bismuth ointment, or a calamine lotion did no good. She left this town and passed out of my hands in pretty much the same condition as when she had come to me.

Case IX.

Mr M., aet 33. Eczema of anus and between the buttocks. It was very irritable. There were no piles or fissures. No cause could be assigned. After he had begun treatment he had an outbreak of dry scaly eczema on the thigh of the right leg, accompanied by a good deal of itching.

Treatment:

First seen 16th February, 1897. After each stool he bathed the anus with cold water and used lint instead of paper. Kept the stools soft. The buttocks were separated by lint. Internally he had ichthyol, grs. $7\frac{1}{2}$, three times a day, to keep the stools soft. Externally,

Ichthyol	M. XX.
Resorcin	gr. v.
Zinci Oxidi	\mathfrak{z} i.
Vaselin	\mathfrak{z} ii.
Lanoline	ad \mathfrak{z} i.

2nd March 1897./

2nd March, 1897.

Improved and much less irritation.

29th March, 1897.

Reported himself cured at anus, but was troubled with the thigh.

12th April, 1897.

Not much better, though he had been treated with a 5% ichthyol lanoline salve. I increased it to 10%.

17th April, 1897.

Still much the same. Stopped the ointments and ordered

Rx Ichthyol 3i
 Aqua ad 3i.

30th April, 1897.

Much better. Irritation relieved from the first.

18th May, 1897.

Rash all gone and quite cured.

Remarks:

Here the cure at anus was quick and satisfactory. On the thighs for some reason ointments were useless, but he got relief at once from an 18% paint.

Case X. /

Case X.

Master M., aet 3 years. Eczema of face. Papular and vesicular, with crusts, irritable and itchy.

Treatment:

First seen on the 17th May, 1897. Internally, Ichthyol, grs. i. in chocolate tablet given three times a day. In addition, malt extract was ordered, as child was weakly and delicate. To the parts which were weeping a dusting powder of carbonate of bismuth and starch was applied. To the rest of the face

R	Ichthyol	M. xxx.
	Resorcin	gr. vi.
	Zinc. oxidi.	℥ ii.
	Pulv Amyli.	℥
	Vaselin	℥ iv.
	Lanoline ad	℥ ii. ft. ung.

21st May, 1897:

Face not weeping now and less irritable. The ointment was now used all over the face.

31st May, 1897:

Much better. Face not nearly so inflamed. It is now dry and scaly. Ordered to use,

R	Ichthyol	M. 50.
	Resorcin	gr. x.
	Vaselin	℥ i.
	Lanoline ad	℥ ii. ft. ung.

23rd June, 1897.

Nearly well, only one or two small scaly patches to be seen. The child slept well and had increased two pounds in weight.

Case XI.

Mr P., aet 18 years. Seborrhoea of scalp. Hair was scanty and all over scalp was a dry scaly condition, no crusts and no inflamed surface.

Treatment:

Washed with equal parts of sapo virides and sp. vinii rectific. twice a day and a 10% ichthyol lanoline salve after each washing. In three weeks he was cured.

Case XII.

Mr I., aet 46. He was the owner of a large drapery establishment. Never had had a holiday for many years and was of a very worrying disposition. Suffered from eczema of the face, associated with a slight acne rosacea. The ears and chin were particularly affected.

Treatment:

Internally, he got ichthyol 5 gr. three times a day, increased later to $7\frac{1}{2}$ grs. He also had strychnine/

ine in bitter infusion given to improve the appetite.
Externally, for two weeks he was kept on

Rx
Ichthyol M. 24.
Bis. subnit. 3 ii.
Vaselin.
Lanolin aa 3f ft.ung.

Sig. Apply twice a day.

After the cracked and weeping areas were dried up he was ordered,

Rx
Ichthyol M. 40.
Resorcin gr. x.
Vaselin
Lanoline aa 3f

Gradual improvement took place during the next month when he was sent to the Mild Sulphur Baths at Starbeck, near Harrogate. He came back in a fortnight quite well and has remained so ever since, namely three years.

Remarks:

As in the first case quoted the ichthyol taken internally had a most beneficial effect on the stomach; when combined with the strychnine the appetite improved and he gained tone. All the time he was under treatment he continued at business.

Case XIII.

Baby W., aet. 9 months. Suffering from an irritable weeping eczema of the face during teething.

Treatment:

Seen 13th June 1896. Applied twice a day.

Ichthyol M. xv.

Vaselin

Lanoline

aa 3f

The disease was cured in ten days.

Case XIV.

Mr. T., aet 65. Suffering from diabetes.

He had eczema of the arms, dry scaly and very irritable with the skin hard and dry.

Treatment:

Nothing was given internally. Dieted as in diabetes. Ordered to apply,

Rx
Ichthyol gr. xl.
Ac. Salicyl. gr. x.
Ac. Borici 3 ij
Vaselin 3 ii
Lanoline ad 3 i. ft. ung.

First seen on 22nd April, 1896.

21st/

21st May, 1896.

Not much improvement.

22nd May, 1896.

Still the condition was bad. The skin was hard and irritable. Ordered

Rx	Ichthyol	3 ii.
	Resorcin	gr. xx.
	Ac. Salicyl.	gr. xxx.
	Zinci oxidi	3 ii.
	Vaselin	3 vi.
	Lanoline ad	3 ii. ft. ung.

Sig: Apply twice a day.

This did better, and in another month the skin was soft, scaliness gone and irritation very much better. Still it took quite another month for all traces to disappear.

Case XV.

Miss C., aet 7 years. Eczema of scalp. Crusts painful and irritable.

Treatment:

Hair cut short. Crusts softened by starch boracic poultices and the following applied twice a day:

Rx	Ichthyol	3j
	Hyd. Ammon.	gr. x.
	Ac Borici	3 i.
	Vaselin.	3j
	Lanoline ad	3 ii.

Internally, Ichthyol 3 grs. in chocolate was given three times a day. Cured in a month.

Case XVI.

Mrs. I., aet 60, suffered from varicose eczema of leg. The part affected was a large patch on the front of the leg near ankle.

The veins were very varicose. There was no exudation.

Treatment:

Elastic bandage. Five per cent ichthyol lanoline ointment. Cured in six weeks.

General remarks:

All the above cases are types of different forms of eczema affecting various parts of the body. In many of the cases treatment had already been tried before coming to see me and in every case unsatisfactorily. I attribute the cure in every case to the Ichthyol/

thyol in part or wholly.

When the cases were acute no washing with soap was allowed, simply rinsing the face with warm water, through which oatmeal had been strained.

After the parts were dry or if dry when first seen, Unna's 10% ichthyol soap was used.

No special diet was imposed.

The ointment was not simply smeared on, it was gently rubbed into the skin wherever practicable. The parts were then covered with lint or linen or silk, as no cotton or flannel was allowed to touch the parts affected.

In cases of face eczema, I here used the zinc ichthyol salve muslin. The patients all speak of the feeling of relief it gives them. In some cases, it is rather difficult to keep applied.

The cases quoted show I think that ichthyol benefits in the following ways.

- (1) Its "reducing action" on inflamed capillaries.
- (2) Its antigerminicidal action as in Eczema Seborrhoicum.
- (3) Internally be a direct action in the skin, and indirectly by preventing the disintegration of albumen and thereby improving the general health.

A C N E.

This is a disease where Ichthyol is specially beneficial taken internally and used externally. It is useful in both Acne Vulgaris and Acne Rosacea. In the former strong applications can be borne, but in the latter much weaker strengths must be used. The best results are got when the external and internal treatments are combined. The good effect of ichthyol here is due to its contracting influence on the blood-vessels. Sometimes we meet cases where the epidermis is so thin and skin so irritable that even weak solutions (in acne rosacea) could not be borne. Here the internal use alone along with such remedies as hot steaming will suffice to effect a cure.

Malcolm Morris (Clinical Journal, Nov. 16th, 1892) got marked improvement after a few days administration. He begins with five grains taken night and morning, gradually increased to ten grains taken three times a day.

Unna, in his paper "Ichthyol and Resorcin" relates some excellent results he has had.

Morgan Dockrell (Medical Press and Circular, 7th December, 1892) used ichthyol internally and externally in Acne and speaks highly of it.

Ohmann Dumesnil (Tri-state Medical Journal, Sept. 1896) uses Ichthyol as a reducing agent for the capillaries. He gives it alone with lanoline or combined

with Salicylic acid, thus:

R^x Ichthyol 3i.
Lanoline
Aq. Rosae aa 3f
ft.ung.

R. Ichthyol 3f
Ac. Salicyl 3i.
Ung. Aq. Rosae 3i.
ft.ung.

My own general plan of treatment is to begin with 5 grs. three times a day after food increasing up to 10 grs. three times a day. Every night and morning the face is steamed for fifteen minutes and washed with ichthyol soap made into a lather allowed to dry on. and then gently washed off with simple warm water. (In some cases this may suffice for a cure) in Acne Rosacea. After each washing the ichthyol salve (often combined with ammoniated mercury) is applied. If any errors in diet are detected these are rectified. The use of the ichthyol will of itself cure mild cases of constipation, if not I give a compound pill of iridin and euonymin or podophyllin. In acne vulgaris strong sulphur or ichthyol soap is used with brisk rubbing by means of a flesh glove. This is done after the steaming.

The first case I quote rather fully.

Case I.

Mrs R., aet 46, married, with a family. Suffered from/

from acne rosacea for six years. She had been under treatment all this time and had seen a specialist without receiving any benefit. I saw her first in the beginning of February 1897. Her face was red all over, the smaller blood vessels being very prominent. The nose, brow and chin were covered with inflamed sebaceous glands, some being merely papules, others of them pustular. Face was painful. The rest of the skin was somewhat thickened. She could not go out without a veil. She suffered occasionally from indigestion, but was never very constipated.

Treatment:

Placed on ichthyol, 5 grs. three times a day and externally

Ichthyol gr. 25.

Hyd. Ammon. gr. v.

Vaselin

Lanoline aa *3j*
ft. ung.

Sig: Apply twice a day.

At first no soap was used, simply washing the face with oatmeal water. Improvement was manifest from the first. In a fortnight it was distinct. The skin was softer and more flexible. Much less pain. The amount of ichthyol was now doubled and as/

as the appetite was poor, ext. nux vom. was given before meals. In another month there were scarcely any inflamed glands and the redness was confined to a few dilated vessels on the cheeks. She could now go out without a veil. The ichthyol was now increased to 10 grs. three times a day. Two months later there were no traces of Acne and she has kept well ever since.

Remarks:

In this case which resisted all remedies for six years improvement began the moment ichthyol was begun and to ichthyol I unhesitatingly gave the credit of the cure. Up till now she has never suffered any further inconvenience. A similar condition existed in her daughter, aged 24 years, which yielded to ichthyol in an equally satisfactory manner.

Case II.

Mr F., aet 67. The face, principally the nose and adjacent skin of the cheeks was affected with acne rosacea.

Treatment:

I adopted the general plan of treatment as to steaming, etc., and applied

R.
Ichthyol M. xxx.
Hyd. Ammon gr. v.
Resorcin gr. v.
Vaselin.

Lanoline \overline{aa} $\frac{3}{4}$ ft. ung.

The condition improved quickly and remained cured till the spring of 1898 (year following first treatment) when he had a slight return which quickly gave way to similar treatment.

Case III.

Miss I. M'C., aet 17. Case of Acne Vulgaris in a school-girl. This case is typical of many I have had. She suffered much from constipation, due I believe to hurrying over her food in order to catch the train for school. Face was covered with inflamed sebaceous glands and "blackheads".

Treatment:

Steaming. Brisk rubbing with flesh glove and use of sulphur praecip. ointment with hyd. ammoniat. Internally I gave saline purges. This did not do the good I expected, so I changed from sulphur soap to a 10% ichthyol soap and applied the following:

R.
Ichthyol M. 72
Resorcin gr. x.
Vaselin $\frac{3}{4}$ ii.
Lanoline ad $\frac{3}{4}$ i. ft. ung.

Sig: Rub into skin night and morning.

Internally I gave 5 grs. of ichthyol three times a day and every second night a Co. Iridin Pill.

She began to improve gradually, but surely, and in three months was quite well. I am sure I should have done better if I had given the ichthyol at the beginning.

Case IV.

This was a case in which I was unsuccessful in curing Acne Rosacea.

A stout, florid woman saw me in Feb. 1896, complaining of redness of the face and of it paining her. She told me she had had the same trouble before.

I used a mild 10 M. to the oz. ichthyol lanoline salve. She came back in a month saying she was no better. I then increased the ichthyol to 20 Minims, but got no good after another month. I did not use ichthyol internally. After this she was evidently dissatisfied and came no more.

I believe looking back now that if I had used ichthyol internally and not used it externally at all I think I would have got better results.

E R Y T H E M A.

By this I mean those mild inflammatory derangements of the skin which may or may not be accompanied by exudation. Under this heading I include chilblains. In many of these cases relief is got from ichthyol. The pain and itching are relieved.

M'Pherson (British Medical Journal 28th Feb., 1891.) chilblains with a 30% lanoline or vaselin salve. He states it relieves the irritation completely and rapidly.

I use the ichthyol either as a salve or paint, and either alone, or in the case of chilblains, sometimes add Ung. Iodi.

Case I.

Mr C. B., aet 28, a grocer to trade, came to me with several fingers inflamed and painful.

Treatment:

Internally I gave sodium salicylate, 10 grs. three times a day. Externally I used for a day or two Glycerine and belladon. paint. (B.P.) but with little relief. I then used

R _x	Ichthyol	M. 40.
	Ung. Zinci Oxidi	$\frac{3}{4}$ i.

After/

After this was applied relief was quick and recovery soon took place.

Case II.

Mrs M'P., aet 68. After a severe attack of influenza and while convalescing there suddenly appeared on her arms, hands and shoulders several wheals of Lichen Urticatus attended with a good deal of itching.

Treatment:

I painted the wheals with a solution of Ichthyol M.40 to oz. of water. This relieved the pain and itching at once. The spots soon dried up and disappeared. Here the immediate relief of the itching was more satisfactory than what I have had in many cases.

Case III.

Miss H., accustomed to get an erythematous inflammation of right ear. No exudation, simply redness. Weak solution of ichthyol did no good here. It took a 40% solution in water to relieve and now any time it appears this strength relieves and cures at once.

ERYSIPELAS.

In the treatment of erysipelas with ichthyol the consensus of opinion points to the value of ichthyol. Allan Jamieson, Morgan Dockrell, Nussbaum, Unna, Klein, Schwimmer all have shewn that ichthyol is one of the best drugs we have in curing erysipelas. I have only had the opportunity of using it in two cases of idiopathic erysipelas and one of these cases was complicated by diphtheria. This case also had a good many abscesses of face and neck. I painted twice a day with a 40% solution of ichthyol in water. This gave great comfort to the patient and checked the further spread of the disease. The pain was always relieved after the painting. No reliance could be placed on the temperature, which was not very high; but the pulse rate was very rapid.

In the second case there was simple idiopathic erysipelas. Here a 50% solution was painted on the margin of the inflammatory area (which was on the face). It at once checked the spread. Over the inflamed area itself a 40% lanoline vaselin and ichthyol salve was spread and the parts protected by wool. After the first day the temperature fell and daily kept falling from 103°F. to normal by the fourth day. In eight days there was no longer any pain and the redness was nearly gone.

C O N C L U S I O N .

The cases of the various diseases I have quoted I have taken at random from my notes. They all have occurred in the course of an ordinary private practice. Every practitioner knows the difficulty in getting patients to carry out their orders. They often forget to take the medicine or apply the ointment, etc. Still with all that my success in using ichthyol has been great. Through this I am getting more and more of these cases through my hands and daily I am being confirmed in my belief that in ichthyol we have one of the best remedies in use to relieve these diseases. I have used ichthyol in many other diseases with success, such as Endometritis, where I have had some striking results. Although it does not come within the scope of this paper, one case of endometritis which under ordinary routine practice would have had scraping of the uterine mucous membrane included in the treatment, was cured by the continued application nightly of glycerine ichthyol tampons in the proportion of two drachms to the ounce of glycerine. This patient had had two mucous polypi removed from the cervix without relieving the pain. She therefore was very reluctant to undergo another operation.

The/

The treatment was continued over five months with the addition of taking Ergot. Nux Vom. and Potass. Chlorate at the menstrual period. The result is highly satisfactory, as all pain and "bearing down" feeling is gone and the patient feels quite well again. I had a similar case in an unmarried woman (the first had a family of three) with equally good results.

Recently I have used it in strong solution to paint over sprains. The swelling is reduced quickly in the few cases I have tried it in and I believe the cure is a speedier one than any of the older plans with perhaps the exception of massage. Other men have used it in Rheumatism, Tuberculosis and Gonorrhoea with success.

In my hands the quick relief from the pain and irritability apart from itching in Acute Eczema is remarkable. I believe this to be due to the constriction of the dilated and inflamed bloodvessels.

As to the nature of the mode of application, each case must be treated on its merits, some doing better under salves, others under paints, etc.

In chronic eczema again, how quickly the dry, thickened, scaly skin reacts to the application of the drug. The skin becomes softer, smoother, and more

more like the delicate skin seen in new epithelium.

My experience has been and is shown in the cases described that a 2% to 5% strength is best in acute form of inflamed skins and in the more chronic dried conditions a 5% to 10% strength answers best. In Acne Vulgaris anything up to 25%, namely between 10% and 25% is useful.

In all cases the internal use of the drug helps. In every one of my cases the cure was a quicker one if the ichthyol was given internally in combination with the external use. My limited experience of Ichthalbin^e has shown it to be useful in the exuding eczemas of adults as well as children.

From clinical facts alone I am induced to believe that ichthyol taken internally has a direct influence on the skin and most probably is excreted by it. Certainly the taking of ichthyol internally increases weight and this more especially applies to weakly, strumous children.

The one disappointment I must record is that itching is not relieved so quickly as one is led to expect, certainly not so quickly as the pain. Patients express gratitude at the feeling of comfort experienced but the itching soon returns. Certainly after the use of the ointment or whatever application is used the itchiness disappears after a time, but it is/

is always the last to go.

In Prurigo and Pruritus Vulvae or Ani, I have not got much good from Ichthyol alone. I refer to those cases where there is no known organic cause such as Diabetes, ulcers of cervix or fissures at anus. I have tried it in eleven cases and in only one case had satisfaction, and she was a pregnant woman with Pruritus Vulvae. In none of the other cases did it relieve any better than camphor, ol cadi, or any other drug used for this disease.

One thing has struck me forcibly, namely, that in many cases of chronic eczema with dry skin not necessarily hardened, the watery solution relieves the itching quicker than the salves.

When prescribing a salve I always advise the patient to wear the oldest underlinen as the ichthyol stains. It is stated that ^{if} it is quickly washed in warm water, any clothing stained will be made quite clean again. It is better, however, to take the precaution of using old clothing.

Ichthyol of course is not applicable to every case of eczema or acne, neither do I claim for it a specific action; but used rationally I do say it is a useful drug in these diseases.

Dr Norman Walker in his "Introduction to Skin Diseases" speaks of the haphazard use of ichthyol in eczema/

eczema and I agree that if not used carefully, it will do harm instead of good. The experience I have had and the great benefits resulting from its use in my hands, compel me to speak only highly of the drug.

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